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ABSTRACT

The conceptual orientation that guides the University of Utah's field-based doctoral program in educational administration is described in this paper, with a focus on making judgments within the decision-making process. The first part explains the rationale for adopting the conceptual orientation and the second part describes the normative model upon which the program's conceptual orientation is based. Three common sources of human error are identified: knowledge structures based on previous experience; the availability heuristic; and the representativeness heuristic. The third part of the study explains plans for using the normative model as an instructional tool. A conclusion is that the model provides a normative and interpretive tool for determining the applicability of theory to daily administrative practice. (8 references) (LMI)

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IMPROVING JUDGMENT CALLS: USING A NORMATIVE MODEL OF HUMAN INFERENCE IN THE ADVANCED PREPARATION OF EDUCATIONAL ADMINISTRATORS

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IMPROVING JUDGMENT CALLS: USING A NORMATIVE MODEL OF HUMAN INFERENCE IN THE ADVANCED PREPARATION OF EDUCATIONAL ADMINISTRATORS

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Our purpose in writing this paper is to describe and discuss the conceptual orientation that guides the University of Utah's field-based Ed.D. program in educational administration. That orientation focuses on decision-making. More specifically, it provides a perspective on one element of decision-making: how people, including administrators, make judgments. This paper is not intended to advance theory or to report the results of a program evaluation. Instead, it is speculative. We have merely drawn upon a theory of human cognition because it will, in our estimation, provide a useful instructional tool. The program in which that orientation is being employed is in its first year. Thus, our experience and data on the efficacy of employing the orientation outlined here are limited.

The conceptual orientation discussed in this paper is based on a normative model of what constitutes adequate judgment. It is drawn from research on human cognition that identifies the sources of common inferential errors as well as measures that can be taken to minimize bias and error in judgments. Students in the University of Utah's field-based Ed.D. program in educational administration are first exposed to this conceptual orientation in the initial class of their doctoral course of study. The orientation is then employed in subsequent courses to guide students in applying theory and research to the analysis of problems of practice.

In this paper we discuss three points. First, we explain the rationale for adopting a conceptual orientation that focuses on judgment in decision-making. Second, we describe the normative model on which the Ed.D. program's conceptual

orientation is based. Third, we explain how we plan to use the normative model as an instructional tool in the Ed.D. program.

RATIONALE FOR THE CONCEPTUAL ORIENTATION

Three issues contributed to our adopting a conceptual orientation that focuses on judgment in decision-making as the basis for our department's field-based Ed.D. program in educational administration. One concerns the nature of administrative work. A second involves the capability of university programs to contribute to the training of administrators. And, a third focuses on providing a bridge over the oft cited gap between theory and practice.

The aim of the University of Utah's Ed.D. Program in educational administration is to provide advanced professional preparation for experienced administrators. Consequently, a major issue in adopting a conceptual orientation for the program was that the program reflect in some way the nature of administrative work. Administrative work, of course, has many dimensions (Boyan, 1988). One dimension that has received substantial attention from students of administration is decision-making. As Simon (1945) notes in Administrative Behavior, decisions in organizations often determine actions. Moreover, administrators' decisions can influence the decisions and, thus, the actions of other organizational members. In that way, administrators' decisions can ultimately affect the overall performance of organizations. Following Simon and the work of other scholars, we adopted the position that decision-making is a crucial dimension of administration. Thus, we sought a conceptual orientation for the Ed.D. Program that illuminated the process by which decisions are made. Ultimately, we borrowed a conceptualization of human inference, an element of decision-making, from cognitive psychology.

A second issue was the capability of university-based programs to prepare

educational administrators. In the past, administrator preparation programs have emphasized the development of skills, such as those employed to supervise teachers, or the transmission of knowledge in specific content areas, such as school finance. However, a growing number of scholars have argued that administrator preparation programs should focus on developing the analytical skills of administrators. March (1974) reasoned that universities enjoy a relative advantage in certain aspects of administrator training and suffer a relative disadvantage in others. He concludes that the university's primary domain is that of the intellect and, thus, that university-based administrator training programs should largely be devoted to the development of its students' analytic capacities. This characterization of the capability of university-based programs to train administrators reinforced our assessment of the efficacy of adopting a conceptual orientation that focused on human judgment in decision-making to guide the Ed.D. program in educational administration.

A third issue concerned the oft cited gap between theory and practice in administrator preparation programs. The model of human judgment on which the Ed.D. Program's conceptual orientation is based explains that people draw upon theories--both those that are explicitly acknowledged and those that are only implicitly invoked--to make judgments. The model indicates that, while the reliance on theory can simplify the making of routine judgments, it can also introduce bias and, thus, produce poor judgments. This recognition of the role that theories play in making judgments may serve as a conceptual bridge between theory and practice in three ways. First, the model of judgment, itself, is a theory that can be applied by students to examine how they make administrative decisions. Second, the formal theories to which students are exposed in the doctoral program can, from the perspective of the model of judgment, be seen as

adding to the repertoire of theories upon which students can draw in making decisions. Third, the recognition that theories restrict the evidence that is considered in making judgments can, on the one hand, assist students in avoiding the trap of overlooking pertinent information. On the other hand, it can inform the manner in which students employ various theories to guide the collection of information about administrative problems.

A NORMATIVE MODEL OF JUDGMENT

Nisbett and Ross' book, Human Inference: Strategies and Shortcomings of Social Judgment, is based on an assumption that is particularly relevant to the instruction of school administrators in an advanced degree program: that causal attribution is a fundamental process underlying much of social perception and action. Starting with the work of Kelly (1967) and Heider (1958), Nisbett and Ross argue that the lay-person makes causal inferences using criteria analogous to those used by the trained social scientist. Specifically, Nisbett and Ross argue:

> The lay-person notes the covariation between particular 'effects' (social acts and outcomes) and potential 'causes' (the presence or absence of specific actors and particular features of the situation. From such observations, the lay-person arrives at roughly the same conclusions that the academically tutored scientist would reach through more formal statistical analyses and more rigorously applied logical principles (p. 5).

The goal or purpose underlying the orientation of this Ed.D. program is to provide students with an understanding of how inferences about data and consequent judgments are made. We recognize the rationalistic assumptions of this model, that decisions are goal oriented and stem from empirical data

related to the problem, but accept them as reasonable foundations from which to operate. This assumption provides the conceptual backdrop against which we explore the inferential failures in decision-making. Nisbett and Ross identify three sources of inferential error for the intuitive or lay-scientist, as they call the lay-person: 1) the existing knowledge structure, 2) the availability heuristic, and 3) the representativeness heuristic. These heuristics are, according to Nisbett and Ross, related to the steps that trained scientists use to make judgments, but they are described as inferential shortcuts that lead to a high probability of erroneous judgments justifying the use of the Nisbett and Ross' conceptual model in the Ed. D. program, the normative model is outlined and then the three sources of inferential error introduced above are discussed.

Implications For Administrators: Practice and Theory

The evidence of a correspondence between the inferential strategies of lay-persons (or intuitive scientists) and the academically tutored scientists is one reason why we believe that Nisbett and Ross' observations about human inference are particularly appropriate to the training of school administrators. Another is that school administrators are making important decisions about policies, programs and interventions that have long term effects on the lives of children. The ethical and equity issues underlying the decisions of administrators, as they affect children, demands a rigor of decision-making above and beyond the logic of common sense and experience. It is not that common sense and experience are inappropriate sources of information, but rather they too often are subject to biases, incomplete information, or misapplication of inferential strategies that confound or confuse inferential conclusions, actions and policies. As Nisbett and Ross succinctly explain: "In ordinary social experience, people often look for the wrong data, often see the wrong data, often retain the wrong data, often

weigh the data improperly, often fail to ask the correct questions of the data and often make the wrong inferences on the basis of their understanding of the data" (p. 12).

Our students often wonder, of the above statement, how they ever made any decisions that sustain either political or empirical validity. Nisbett and Ross are not insensitive to these concerns and recognize that in many cases decisions are neither fixed nor necessarily made by any single individual. Consequently, the inferential errors that confound decision-making are not always fatal. This provides little comfort, however, because the purpose of our Ed.D. program is to improve the practice of administrators, and here we hold that theory can properly and effectively do just that. But rather than outline the steps associated with the normative decision-making model (which are strongly embodied in basic statistical theory) we have chosen to focus on the inferential errors associated with most judgments as the focus of our instruction. We believe this enables practitioners to reflect on their practice; to identify common misconceptions about their practice and better understand the implications associated with these inferential errors.

The Normative Model

Nisbett and Ross use the formal inferential rules of professionally trained scientists as the standard against which the judgments of lay-person are compared (p. 8). The authors describe these inferential rules as the "normative model." By this they mean to identify the sequence and tasks that professionally trained scientists use to solve inferential problems. The most basic of these tasks is descriptive. The formal scientist must be able to describe the object or event with data. Further, where there are more than one data, the formal scientist must be able to employ sampling strategies in order to generalize findings to the

population. Additionally, scientists are concerned with observing covariation between events. Where possible causal explanations of covariation are formulated by scientists, and these principals are often used as the basis for predicting future events. Finally, Nisbett and Ross point out, formal scientists apply formal rules for testing theories, rules that intuitive scientists often shortcut or misapply.

Existing Knowledge Structures

The strategy underlying the use of Nisbett and Ross' book as an instructional schema for the Ed. D. program is not based on the didactic application of the "normative model," rather we use normative model as a way of describing the source of inferential error that commonly confound lay-scientists. For example, Nisbett and Ross argue that intuitive scientists are often misled by the presence of existing theories about an object or event. The presence of pre-existing knowledge structures, as Nisbett and Ross describe them, influences the way individuals interpret, as well as characterize, events. This is simply to say that adults rarely come to an event without previous experience that helps them categorize and associate the event with other influences. If human observers were simply passive clerks registering items of information, this past experience would not be significant. But, as Nisbett and Ross observe, humans are not passive, rather they are "...an active interpreter, one who resolves ambiguities, makes education guesses about events that cannot be observed directly, and forms inferences about associations and causal relations" (p. 17).

Our past experience, according to these authors, enables us to use heuristics to easily select and categorize information as well as infer causal relationships relevant to our judgments and actions. The problem, however, is that where the normative model dictate rules by which the frequency and character of an object

are described (descriptive statistics), lay-scientists rarely adheres to the same rules with scientific discipline. Rather, lay-scientists are at the mercy of their memory to assess the frequency of events. As Nisbett and Ross note: "This would present little difficulty if the only determinant of the memorability of events was their relative frequency. This is not the case, however, since salience, retrievability, and other factors unrelated to true frequency, often influence the make-up of the sample of events that the individual can recall" (p. 9).

The Availability Heuristic

The availability of data strongly influences both our estimates of the frequency of events as well as our sense of the causal influences of events. Judgments strategies based on the availability of data, in contrast to the normative model where a laborious and careful sampling of a population is used to establish frequencies, are described by Nisbett and Ross as the availability heuristic. This is to say that the availability of data - - its salience, vividness and completeness - - aids in the solution of a problem or judgment but violates the normative assumptions about how inferential judgments ought to be made.

A familiar example, where pollsters are asked to sample American adults to estimate the unemployment rates, is used in the text to illustrate the point. Lay-persons were asked to characterize the frequency of unemployment in America. Unlike the scientist, who would in the best of worlds carefully sample the population to make judgments, the lay-person relied heavily on the availability of data to make an estimate of the frequency of the unemployment rate. There are many factors uncorrelated with frequency that can influence the memorability of events. For example the , such as a case where An individual who loses their job

and home and eventually their health, may find that the salience and vividness of these events strongly biases their estimates of the magnitude of unemployment in America. Thus the findings of the poll should not be surprising: "Currently unemployed workers tend to overestimate the rate of unemployment, but currently employed workers tend to underestimate it" (Nisbett and Ross, p.19). The point is simply that an individual's estimate of the frequency of events is strongly biased by the availability of their experience and memory of events.

Nisbett and Ross also show that vivid, complete, and easily recalled examples of a event not only strongly biases an individual's sense of frequency but also their sense of causality. For example, Nisbett and Ross note, "an actor who gives a dollar to a beggar is apt to attribute his behavior to the sad plight of the beggar, but the observer of the behavior is apt to attribute it to the actor's generosity" (p. 22).

Where the availability heuristic may prove accurate enough for the purpose of some lay-scientists, the judgments of school administrators deserve more scrutiny. Assuming that educational administrators are rational decision-makers operating within an organizational framework bound by ethical as well as legal obligations to make fair and equitable decisions, we argue that the normative decision-making model is more likely to lead to conclusions and judgments that are defensible in both a court of law (due process) as well as in a court of justice (ethical issues).

Representativeness Heuristic

A third source of error that we use to discuss the decisions of our graduate students as practitioners is labeled by Nisbett and Ross as the representativeness heuristic. Many everyday judgments of practitioners requires them to act quickly to such events as "the irate parent." An administrator's

experience and existing knowledge structure may enable them to quickly assess the situation and parent, using a representative heuristic, but that does not ensure them of correctly making such judgments. The problem is that an individual's knowledge structure and the availability of data can influence the choice of characteristics by which an event or object is categorized. Thus, individuals can make inferential conclusions about events, people or objects that are unwarranted. Recognizing the potential flaws in our inferential strategies proved to be more than an academic exercise for our students, it revealed systematic and fundamental errors in the judgments and inferences associated with their everyday practice.

An example helps illustrate the character of the representative heuristic. Nisbett and Ross cite the following example: "They note that they have a friend who is a professor. He likes to write poetry, is rather shy, and is small in stature. They then ask, which of the following is his field: a) Chinese studies, or b) psychology" (p. 25)? If readers, as our students (and even in truth we professors) choose Chinese studies, then Nisbett and Ross argue that you were "seduced by the representativeness heuristic" (p. 25). The representativeness heuristic involves the application of the resemblance or "goodness of fit" criteria to problems of categorizing events, people or objects. The personality profile of a Sinologists fits the stereotypical profile presented.

One of the problems with succumbing to the goodness of fit, or representativeness heuristic, is that the inferential strategy does not necessarily include a consideration of baserate information. When one considers the relative frequency of Sinologists versus the number of psychologists, it seems reasonable to guess that the probability of the author's friend (and

remember the authors are psychologists) works in the field of psychology.

The failure of both the availability and representativeness heuristics as judgment strategies is not absolute. In many cases lay-scientists can effectively and efficiently utilize these heuristics to solve problems. This is particularly true where the lay-scientist has a well developed and accurate knowledge structure of the decision/work environment. One might describe this as having a good strong local theory about how the organization in which they operate functions. But Nisbett and Ross argue that most lay-scientists do not operate with a critically examined local theory or knowledge structure. This is not to say that lay-scientists work without theory, but rather that in most cases their theory is flawed. The authors characterize this flaw as the fundamental attribution error:

> The most general and encompassing lay-theory of human behavior - so broadly applied that it might more aptly be termed a "metatheory" - is the assumption that behavior is caused primarily by the enduring and consistent dispositions of the actor, as opposed to the particular characteristics of the situation to which the actor responds. Throughout this book we refer to what Ross (1977a, 1978; Ross & Anderson 1980) called the "fundamental attribution error" - the tendency to attribute behavior exclusively to the actor's dispositions and to ignore powerful situational determinants of the behavior (p. 31).

The examples of this abound. For example, consider the popular notion, whether the individual reader ascribes to the particulars or not, that some parents do not care about the education of their children. In many cases these parents do not help children with their homework, do not support school

activities and fail to meet with teachers to try and improve the opportunities of children. The salience of these "facts" particularly as they are important to teachers and school administrators may, however, override attention to other situational factors. The theory, by which causal explanations are developed, focus almost exclusively on attributional characteristics of the individual: parents that attend to these school related issues care about the education of their children, parents who do not attend to the same issues do not care about these issues.

But consider the situational factors. Note, for example, the relative stock of resources parents have to respond to the demands of schools. Wealthy parents, with two cars and network of baby sitters may find it relatively easy to visit the school and track their children in a manner consistent with the interest of school officials. Poor parents, with a car that hardly runs and the complications that ensure in situations where things do not operate smoothly, may find it considerably more difficult to divide their time from getting food on the table, fixing the car, getting to work and helping with homework or talking with teachers. Differences in parental responses may have considerably less to do with parents interest in their child's education then the situational factors that profoundly affect the relative cost associated with participating in school activities.

Drawing attention to the inferential strategies by which we make judgments that affect our decisions and actions, has offered our Ed.D. students an opportunity to reflect on their decision-making strategies. Our students found that their preconceived notions about situations (their knowledge structures) lead them to erroneously select and weigh data as important when further reflection would have lead them to more carefully select and weigh information

to inform their decisions and judgments. These reflective exercises, which were developed in class, capitalized on the conceptual model developed by Nisbett and Ross; these exercises sensitized students to the inferential errors associated with the inappropriate utilization of both the representativeness and availability heuristics as strategies for solving inferential problems. We discuss some specific examples of our student's reflective practice latter in the paper.

We have, in the above section, outlined the normative model for making inferential decisions and , relying heavily on the work of Nisbett and Ross, argued that lay-people use the same model, in that they bring theory to bear on interpreting events, seek data by which to inform their judgments, and identify causal relationships to explain relationships. Further, we have argued that to solve the inferential problems of everyday life people employ inferential short cuts, or heuristics, in their problem solving. We identified three sources of error including the influence of existing knowledge structures and the inferential shortcuts Nisbett and Ross labels as the availability heuristic and representativeness heuristic. These short cuts lead to inferential errors.

To the extent that existing knowledge structures or schema accurately represent the complexity of social problems their presence may not negatively affect inferential judgments. But for the most part, as Nisbett and Ross argue, lay-scientist do not critically examine their knowledge or the underlying assumptions on which the construction of these knowledge structures rest. Thus, where flawed knowledge structures are coupled with flawed data sources (derived from the availability of data rather than from a careful sampling strategy) it is little wonder that lay-scientists end-up with erroneous conclusions and judgments.

THE INSTRUCTIONAL USES OF THE NORMATIVE MODEL

We are using the normative model of human inference in two ways in the field-based Ed.D. program in educational administration. First, students learn to use the model to critically examine their own judgments. This occurs in the initial course of the program. Second, students use the normative model as a tool for applying theory to problems of administrative practice. This occurs in the courses that students take during the first and second years of study in the program.

Introducing the Model

The first course of the Ed.D. program in educational administration is devoted to familiarizing students with the normative model of human inference. As we noted, special attention was paid to the three sources of inferential error: knowledge structures based on prior experience, the availability heuristic and the representativeness heuristic. Conventional instructional techniques were employed to have students engage the model. Readings from Nisbett and Ross' text, Human Inference: Strategies and Shortcomings of Social Judgment, are assigned and discussed in class. A brief description of the authors' initial experience in teaching the introductory course follows.

The going was initially slow, but students eventually gained a firm grasp of the model's basic concepts. Class discussions were often peppered with examples of how students, and, yes, the professors, had fallen prey to the three sources of inferential error. Some students enthusiastically embraced the model and its ability to reveal the errors of their judgmental ways. Others expressed a sense of discomfort at having their inferential errors exposed. And, still others questioned the utility of the model in the "real world" where administrators are called upon to make rapid judgments with little opportunity to gather

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information.

When the students began to exhibit confidence in their grasp of the normative model, they were given the following assignment: to build a case study of an actual decision process in which they had participated, employing the normative model as the analytic framework. Case development took three steps. Class discussions centered on the development of cases.

Each student began by developing a detailed description of a decision process. The decisions that students analyzed tended to be significant decisions that entailed numerous judgments over extended periods of time. For example, one student analyzed a decision process involving the adoption of a new policy on student elections at her school. Another examined the process that led her to dismiss a teacher from her program.

In step two students analyzed their cases from the perspective of the normative model, focusing on the impact of knowledge structures and the availability and representativeness heuristics. For example, the student who examined her decision to dismiss a teacher noted that her response to an initial complaint about the teacher was colored by an informal theory based on personal experience and by both the availability and representativeness heuristics. The student noted that she had come to view the teacher about whom the complaint had been lodged as a competent professional. She also based her initial assessment of the complaint on direct observations of the teacher's job performance--that is, readily available data. Finally, the student revealed that her initial assessment of the validity of the complaint was affected by her perception of the personal qualities of the mother who had lodged the complaint.

In the final step students developed conclusions, identifying inferential errors that they had committed and charting preferable courses of judgment and

action that they might have taken. Again, for examples we draw upon a student's analysis of her decision to dismiss a teacher. The student explained that her "theory" about the teacher's competence led her to disregard mounting evidence of the teacher's professional and personal problems. Moreover, because she relied only on her direct observations of the teacher's behavior, she was not aware that the teacher was missing classes and acting inappropriately outside of the school setting. Finally, the student realized that she had dismissed the original complaint as unreliable because she viewed the source, the mother of a student, as unreliable. All of this contributed to the student's initial decision to dismiss the complaint as ill- founded. Only when problems persisted and information from other sources became available was she able to abandon her original theory of the teacher's fitness and recognize the validity of the original complaint and the magnitude of the teacher's difficulties.

Bridging Theory and Practice

The normative model, we believe, can do more than simply provide students with a framework for critically analyzing their own judgments. In our estimation, students will also be able to use the model as a tool for applying theory and research to problems of administrative practice. The normative model might assist students in determining the applicability of theory to practice and in employing theory to inform practice. One of the authors is currently teaching a leadership theory course and the associated field applications course to the first co-hort of students in the Ed.D. program. We will draw on his approach in those two courses to illustrate how the normative model might serve this second function.

In the course on leadership theory, students are introduced to mainstream theories of administrative leadership. In the field applications course,

students apply those theories to the critical examination of their own administrative behaviors.

During the first session of the field applications course, students are given the following assignment: keep a log of all on-the-job activities for a two week (ten day) period. After the students compile their logs, they are given a second assignment: employing the definitions discussed in the course on leadership theory, identify those activities recorded in the log that are examples of leadership. The text used in the course defines leadership broadly: "...influence processes involving determination of the group's or organization's objectives, motivating task behavior in pursuit of these objectives, and influencing group maintenance and culture" (Yukl, 1989, p. 5). This definition reflects March's (1955) and Simon's (1957) observations that social influence, including leadership, is a special instance of causality.

At the completion of the second assignment, students discuss their findings. The normative model of human inference is interjected into the discussion. Students are reminded that availability and representativeness heuristics often lead people to infer the presence of a causal relationship when none exists (Nisbett & Ross, 1980). This is an important issue in discussing how students classified their actions as examples of leadership, because, as noted above, leadership is assumed to be causal.

The question, thus, arises: did the availability of information or perceived similarities between cause and effect lead students to mislabel some of their actions as leadership? For example, a student who is a principal might indicate that she was acting as a leader when she observed a teacher as part of her overall plan to improve that teacher's classroom management skills. If the principal's efforts resulted in changes in the teacher's classroom management,

the principal's actions would seem to fall under the definition of leadership noted above. However, the principal's conclusion may have been colored by the availability of data. She may have witnessed only her interactions with the teacher regarding the subject of classroom management but not those between the teacher and colleagues or a former college instructor. The principal's inference also might have been biased by the perception of similarities between cause and effect. The principal may have suggested that the teacher employ certain strategies and, then, observed that the teacher used similar ones in the classroom. Or, the principal may have taken a highly structured approach in working with the teacher and observed that the teacher appeared to be more structured in working with students. Thus, the normative model can help students in the field-based Ed. D. program to critically assess the applicability of theory--in this case, conceptual definitions of leadership--to their work.

The normative model might also help students to apply theory to the analysis of administrative practice. The normative model indicates that knowledge structures, or theories, that develop on the basis of experience often dictate how individuals draw inferences. The problem is that informal theories can present an oversimplistic view of the world and, thus, serve as poor guides to making judgments. We believe that the Ed.D. program in educational administration can enable students to develop more complex theoretical repertoires. That is, students would collect a broad array of complex theories and apply this theoretical complexity to the analysis of problems of practice. For example, in the field-applications course on leadership, students take their lists of leadership behaviors that survive the test of the normative model and analyze them from the perspective of two theories of leadership. The analysis has two components. The first is interpretive. Students assess the extent to

which theory explains the students' observed behavior. The second is more normative. Students examine how theory might have informed action; they consider what actions they might have taken in light of theory.

SUMMARY

To summarize, the University of Utah's Department of Educational Administration has adopted a normative model of human inference, or judgment, as the conceptual orientation of its Ed.D. program. In doing so, the department has chosen to emphasize one dimension of administrative work in its advanced preparation of educational administrators. That dimension is decision making. The rationales for focusing on decision making are threefold: decision making is central to administration, universities are particularly adept at imparting analytical skills and the model of human inference that has been adopted provides a natural bridge between administrative theory and practice.

The normative model of human inference identifies three common sources of inferential error: knowledge structures based on previous experience, the availability heuristic and the representativeness heuristic. The intention is to have students in the Ed.D. program apply the normative model, emphasizing the three common sources of error, to examine their administrative judgments, to question their assumptions about administrative practice and to apply formal theories in analyzing their field experiences.

While the Ed.D. program is in the first year of its implementation, the initial experience has been promising. In the program's initial course, students were exposed to the normative model of human inference and became adept at using the model to critically analyze their own judgments. Many students became quite enthusiastic about the insights that they gained to their own decisions and consequent actions.

It remains to be seen if the normative model will provide a bridge between theory and administrative practice in courses dealing with aspects of the educational administration knowledge base, ranging from organizations theory to personnel managment. In a course that is aimed at applying leadership theory to the field experiences of doctoral students, the prospects are encouraging. The normative model seems to provide a tool for determining the applicability of theory to the day-to-day activities of administrators and for applying theory to practice interpretively as well as normatively.

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